



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

*September 26, 2002*

OFFICE OF  
SOLID WASTE AND EMERGENCY  
RESPONSE

**MEMORANDUM**

**SUBJECT:** National Remedy Review Board Recommendations for the Eureka Mills Superfund Site (Operable Units 0, 1, 2, and 3)

**FROM:** Bruce K. Means, Chair      **s/B. K. Means**  
National Remedy Review Board

**TO:** Max Dodson, Assistant Regional Administrator  
Ecosystems Protection and Remediation  
EPA Region 8

**Purpose**

The National Remedy Review Board (NRRB) has completed its review of the proposed cleanup action for the Eureka Mills Superfund Site (Operable Units 0, 1, 2, and 3) in Eureka, Utah. This memorandum documents the NRRB's advisory recommendations.

**Context for NRRB Review**

The Administrator announced the NRRB as one of the October 1995 Superfund Administrative Reforms to help control response costs and promote consistent and cost-effective decisions. The NRRB furthers these goals by providing a cross-regional, management-level, "real time" review of high cost proposed response actions prior to their being issued for public comment. The board reviews all proposed cleanup actions that exceed its cost-based review criteria.

The NRRB review evaluates the proposed actions for consistency with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and relevant Superfund policy and guidance. It focuses on the nature and complexity of the site; health and environmental risks; the range of alternatives that address site risks; the quality and reasonableness of the

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cost estimates for alternatives; regional, state/tribal, and other stakeholder opinions on the proposed actions, and any other relevant factors.

Generally, the NRRB makes advisory recommendations to the appropriate regional decision maker. The region will then include these recommendations in the administrative record for the site, typically before it issues the proposed response action for public comment. While the region is expected to give the board's recommendations substantial weight, other important factors, such as subsequent public comment or technical analyses of response options, may influence the final regional decision. The board expects the regional decision maker to respond in writing to its recommendations within a reasonable period of time, noting in particular how the recommendations influenced the proposed cleanup decision, including any effect on the estimated cost of the action. It is important to remember that the NRRB does not change the Agency's current delegations or alter in any way the public's role in site decisions.

### **Overview of the Proposed Action**

The Eureka Mills Superfund site is located approximately 80 miles southwest of Salt Lake City, Utah in historic Tintic mining district in the Tintic Mountains. The site includes the town of Eureka, Utah (population 800) and historic mining facilities located immediately adjacent to residential areas. The contaminants of concern are lead and arsenic which are the result of mining and milling activities beginning in the area in the 1870s and continuing for nearly 100 years. Blood lead monitoring has revealed that a high percentage of the children in the area have elevated blood lead levels and sampling indicates the presence of high levels of lead in the soils surrounding 97% of the residential and commercial property in Eureka.

The preferred remedy proposed by Region 8 includes the excavation of lead and arsenic contaminated yards in residential areas and replacement with clean soil. Contaminated mine waste piles and contaminated soils in undeveloped areas will either be consolidated in an on-site repository or covered with an engineered cap. An interim public health program will be put into place during the construction of the remedy and institutional controls will be required to protect the completed remedy.

### **NRRB Advisory Recommendations**

The NRRB reviewed the information packages describing this proposal and discussed related issues with state and EPA officials on August 28 and 29, 2002. State and EPA representatives included Utah Department of Environmental Quality personnel Brad Johnson (Superfund Branch Manager), Brent Everett (Superfund Section Chief), Dave Bird (State Project Officer), and Scott Everett (Toxicologist); and USEPA personnel Paula Schmittiel (Remedial Project Manager), and Susan Griffin (Toxicologist). Based on this review and discussion, the board offers the following comments:

- The package provided to the board identified a residential action level of 231 ppm lead. At the meeting, the region explained that most background samples contained less than 200 ppm lead. Even at this level, the residential action level is very close to background, which increases the potential for excavating background material during the cleanup of residential properties. The board recommends that the region review the background data during design, such as the speciation of lead in background soils, to ensure that a reasonable background is selected and to confirm that the action level is readily distinguishable from it during remedy implementation.

- The board notes that the action level for residential properties at the Eureka Mills site is lower than many other action levels at lead-contaminated sites due primarily to the bioavailability of lead carbonate and the high concentration of lead in indoor dust and outdoor soil. The board recommends that the region clearly describe the basis for this action level in site decision documents.
- The board notes that the lead action level for non-residential areas is also low compared to action levels used at other non-residential lead sites. Further, the board notes that exposure pathways at this site may be significantly different from those addressed by the adult-lead model. The board recommends that the region (1) explain in site decision documents the uncertainties associated with the application of the adult-lead model to develop non-residential cleanup levels at this site, (2) include consideration of the results of the new monitoring data (unavailable for the board's meeting on August 28-29), and (3) fully consider these issues in implementation decisions.
- The package does not adequately explain the decision to excavate 18 inches in residential areas rather than (for example) six inches or 12 inches. The Board recommends that the decision documents include more information to support this decision. There may be value in reassessing existing data concerning contamination at depth to evaluate more appropriate excavation depths. For example, the package indicates that 40 percent of properties do not have contamination above action levels below a depth of six inches. Selecting a 12 inch excavation depth rather than 18 inches for these properties may result in cost savings and may eliminate the need for tree removals and replacement.
- The Board notes that site remediation will take several years to complete. During implementation, lead exposures will continue and re-contamination may occur. The Board recommends a phased approach wherein higher risk areas (such as high lead concentration soils, residences with high lead concentrations in indoor dust, and easily eroded mine waste piles) are addressed early. A periodic evaluation of the effectiveness of the cleanup efforts (including the lead education programs, interior cleaning, and other risk reduction measures) in time may indicate that a higher residential soil action level may be appropriate for the lower risk source materials to be addressed in later stages of the cleanup, thereby reducing cleanup costs and disruption to the community. Further, the board recommends that the region evaluate whether or not temporary erosion and dust suppression measures would be cost-effective in reducing the potential for human exposures in the interim.
- The board supports the region's plans for an interim action to implement an immediate, aggressive public education program cooperation with State programs to raise awareness of the human health risks and reduce human exposures to lead. The board understands that given the high concentration of lead in house dust at some residences, these actions will include a HEPA vacuum lending program among other measures as may be appropriate. The board notes that effective implementation of these measures is especially important in the short term since remediation of the site is expected to take a number of years.
- The preferred alternative relies upon institutional controls to manage any future post-remediation excavations on residential property. The board recommends that the region

consider including the placement of a visual barrier (e.g., orange plastic mesh) at the base of remedial excavations where underlying soils remain above the action level, to alert residents to the depth of clean backfill.

The board offers several recommendations concerning the cost estimates for the various remedial alternatives:

- The board notes that the estimated cost of residential soil removal at Eureka Mills (\$30 million for 358 properties) is significantly higher than the cost of similar actions at other sites. The board recommends that the region carefully evaluate the estimated cost of residential soil removal and replacement during the design process.
- Although the description of the preferred remedy indicates that the region would maximize capping of contaminated waste piles, the cost estimate is based on 100% excavation of the May/Day/Godiva, Chief Mill, and Bullion Beck Mill sites. Substantial savings should be realized through minimizing excavation costs at these and other sites.
- The cost estimate for the “Perform Borrow Area Restoration” line item appears inflated by a factor of 400. Unlike the costs per residence, where individual costs are identified and then multiplied by the number of residences, the borrow pit is a single location of approximately 1,500sf and requires no further adjustment.
- According to OSWER Directive 9355.3-20 (*Revisions to OMB Circular A-94 on Guidelines and Discount Rates for Benefit-Cost Analysis*) a discount rate of seven percent should be used in developing present value cost estimates for remedial action alternatives during the feasibility study (five and 10 percent were used in the board's package). However, showing a range of costs for different discount factors is instructional.
- Lower cost estimates may result from applying cost element-specific contingency values rather than a percentage of the direct and indirect costs. See OSWER Directive 9355.0-75, *A Guide to Developing and Documenting Cost Estimates During the Feasibility Study*.

The NRRB appreciates the region's efforts in working together with the potentially responsible parties, state, and community groups at this site. We encourage Region 8 management and staff to work with their regional NRRB representative and the Region 3/8 Accelerated Response Center in the Office of Emergency and Remedial Response to discuss any appropriate followup action.

Thank you for your support and the support of your managers and staff in preparing for this review. Please call me at 703-603-8815 should you have any questions.

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